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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,417	08/20/2003	Jack Hwang	ITL.0764D1US (P14416D)	6957
7590	08/26/2004			
TROP, PRUNER & HU, P.C. Suite 100 8554 Katy Freeway Houston, TX 77024			EXAMINER PRENTY, MARK V	
			ART UNIT 2822	PAPER NUMBER

DATE MAILED: 08/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/644,417

Applicant(s)

HWANG ET AL.

Examiner

MARK V PRENTY

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

This Office Action is in response to the amendment filed on August 13, 2004. That amendment has been entered.

The specification's reference (on page 1) to the parent application should be amended/updated to include its patented status.

Claims 20-24 are rejected under 35 U.S.C. 102(e) as being anticipated by Yu (United States Patent 6,368,947 – hereafter Yu '947 – already of record).

With respect to independent claim 20, Yu '947 discloses an integrated circuit (see the entire patent, including the Fig. 2 disclosure) comprising: a semiconductor structure 14; a gate 36 formed on said semiconductor structure; and a P-type source 40 and a P-type drain region 40, said source and drain region including both germanium (see column 5, lines 38-62) and a P-type source/drain impurity (i.e., boron - see col. 5, lines 63-67), said source and drain regions being strained (by virtue of the germanium implant being higher than the boron implant – see column 5, lines 55-57 and 63-67).

Claim 20 is thus rejected under 35 U.S.C. 102(e) as being anticipated by Yu '947.

With respect to dependent claim 21, Yu '947's ratio of germanium to P-type source/drain impurity is greater than one to one (see column 5, lines 55-57 and 63-67).

Claim 21 is thus rejected under 35 U.S.C. 102(e) as being anticipated by Yu '947.

With respect to dependent claim 22, Yu '947's ratio of germanium to P-type source/drain impurity is approximately four to one (see col. 5, lines 55-57 and 63-67).

Claim 22 is thus rejected under 35 U.S.C. 102(e) as being anticipated by Yu '947.

With respect to dependent claim 23, Yu '947's source and drain regions 40 are source and drain extensions (see Fig. 3 together with column 4, lines 22-30).

Claim 23 is thus rejected under 35 U.S.C. 102(e) as being anticipated by Yu '947.

With respect to dependent claim 24, Yu '947's implanted region 40 is a source/drain extension (see Fig. 3 together with column 4, lines 22-30).

Claim 24 is thus rejected under 35 U.S.C. 102(e) as being anticipated by Yu '947.

Claims 20, 23 and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Liu et al. (United States Patent Application Publication US 2002/0086502 – hereafter Liu – already of record).

With respect to independent claim 20, Liu discloses an integrated circuit (see the entire patent, including the Fig. 6 disclosure) comprising: a semiconductor structure 102; a gate 106 formed on said semiconductor structure; and a P-type source 122 and a P-type drain region 122, said source and drain region including both germanium (see paragraph [0016]) and a P-type source/drain impurity (see paragraph [0017]), said source and drain regions being strained (by virtue of the germanium and P-type impurity implants being different – see paragraphs [0016] and [0017]).

Claim 20 is thus rejected under 35 U.S.C. 102(e) as being anticipated by Liu.

With respect to dependent claim 23, Liu's source and drain regions 122 are source and drain extensions (see paragraph [0018]).

Claim 23 is thus rejected under 35 U.S.C. 102(e) as being anticipated by Liu.

With respect to dependent claim 24, Liu's implanted region 122 is a source/drain extension (see paragraph [0018]).

Claim 24 is thus rejected under 35 U.S.C. 102(e) as being anticipated by Liu.

The applicant's argument with respect to the rejection of claims 20-24 under 35 U.S.C. 102(e) as being anticipated by Yu '947 is not persuasive because the applicant fails to even address, let alone rebut, the rationale provided in the last Office Action. Specifically, the applicant fails to even address, let alone rebut, the last Office Action's explanation (on page 7) that: "the ratio of germanium to P-type impurities in Yu '947's region 40 (Fig. 2) is greater than one (thus resulting in a strained junction) because region 40's germanium concentration is higher than its P-type impurities concentration (by virtue of the germanium being implanted at a higher dose than the P-type impurities and to the same depth)."

Given that the applicant does not dispute that the ratio of germanium to P-type impurities in Yu '947's source/drain region 40 is greater than one and given that the applicant's specification discloses that such results in a strained junction (see paragraph [0023]), the applicant's argument with respect to the rejection of claims 20-24 under 35 U.S.C. 102(e) as being anticipated by Yu '947 is not persuasive.

The applicant's argument with respect to the rejection of claims 20, 23 and 24 under 35 U.S.C. 102(e) as being anticipated by Liu is not persuasive because the applicant fails to even address, let alone rebut, the rationale provided in the last Office Action. Specifically, the applicant fails to even address, let alone rebut, the last Office Action's explanation (in the paragraph bridging pages 7-8) that: "Liu's source/drain region 122 (Fig. 6) is strained because its germanium concentration is different than its P-type impurities concentration (by virtue of the germanium being implanted at a different dose than the P-type impurities and to the same depth)."

Given that the applicant does not dispute that the germanium concentration and the P-type impurities concentration in Liu's source/drain region 122 are different and given that the applicant's specification discloses that such results in a strained junction (see paragraph [0023]), the applicant's argument with respect to the rejection of claims 20, 23 and 24 under 35 U.S.C. 102(e) as being anticipated by Liu is not persuasive.

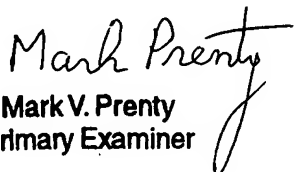
Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Registered practitioners can telephone the examiner at (571) 272-1843. Any voicemail message left for the examiner must include the name and registration number of the registered practitioner calling, and the Application/Control (Serial) Number. Technology Center 2800's general telephone number is (571) 272-2800.


Mark V. Prenty
Primary Examiner